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DATE: April 17, 2006

TO: Examiner BAYARD,
Djenane M.
USPTO GPAU 2141

FAX NO.: 571-273-8300

FROM: Jeffrey G. Toler
Reg. No.: 38,342

RE U.S. App. No.: 10/634,116, filed August 4, 2003

Applicant(s): Kenneth R. Jones, et al.

Atty Dkt No.: 1033-SS00379

Title: SYSTEM AND METHOD TO IDENTIFY DEVICES EMPLOYING
POINT-TO-POINT-OVER ETHERNET ENCAPSULATION

NO. OF PAGES (including Cover Sheet): 26

MESSAGE:

Attached please find:

- ☒ Transmittal Form (1 pg)
- ☒ Fee Transmittal Form (in duplicate) (2 pgs)
- ☒ Brief in Support of Appeal (22 pgs)

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PAGE 1/28 * RCVD AT 4/17/2006 5:46:53 PM [Eastern Daylight Time] * SVR:USPTO-EFAX-1/12 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):08-06

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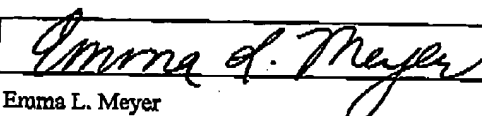
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/634,116	
	Filing Date	August 4, 2003	
	First Named Inventor	Kenneth R. Jones	
	Art Unit	2141	
	Examiner Name	BAYARD, Djenane M.	
Total Number of Pages in This Submission	26	Attorney Docket Number	1033-SS00379

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<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Application Number	10/634,116
TOTAL AMOUNT OF PAYMENT (\$) <u>500.00</u>		Filing Date	August 4, 2003
		First Named Inventor	Kenneth R. Jones
		Examiner Name	BAYARD, Djenane M.
		Art Unit	2141
		Attorney Docket No.	1033-SS00379

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Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
Total Claims		
- 20 or HP = _____ x _____ = _____		
HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims		
- 3 or HP = _____ x _____ = _____		
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3. APPLICATION SIZE FEE

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Name (Print/Type)	Jeffrey G. Toler	Telephone	512-327-5515
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Effective on 12/08/2004.
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For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 500.00**Complete if Known**

Application Number	10/634,116
Filing Date	August 4, 2003
First Named Inventor	Kenneth R. Jones
Examiner Name	BAYARD, Djenane M.
Art Unit	2141
Attorney Docket No.	1033-SS00379

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Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
Total Claims		
Extra Claims		
Fee (\$)		
Fee Paid (\$)		

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims Extra Claims Fee (\$)

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Signature		Registration No. 38,342	Telephone 512-327-5515
Name (Print/Type)	Jeffrey G. Toler	(Attorney/Agent)	Date 4-17-2006

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): **Kenneth R. Jones, et al.**Title: **SYSTEM AND METHOD TO IDENTIFY DEVICES EMPLOYING
POINT-TO-POINT-OVER ETHERNET ENCAPSULATION**App. No.: **10/634,116**Filed: **August 4, 2003**Examiner: **BAYARD, Djenane M.**Group Art Unit: **2141**Atty. Dkt. No.: **1033-SS00379**Confirmation No.: **5754****BOARD OF PATENT APPEALS
AND INTERFERENCES**United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450**BRIEF IN SUPPORT OF APPEAL**Jeffrey G. Toler, Reg. No. 38,342
Attorney for Appellant
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PATENT

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I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The Real Party in Interest in the present Appeal is **SBC Knowledge Ventures, L.P.**, the assignee, of patent application no. **10/634,116**, as evidenced by the assignment set forth at Reel **014229**, Frame **0917**.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, Appellant is not aware of any such appeals or interferences.

III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))**A. Total Number of Claims in Application**

There are 35 claims pending in the application (claims 1-6 and 8-36).

B. Status of All the Claims

Claims 1, 6, 16, 21, 24, and 27 are independent claims. According to paragraphs 3, 5 and 6 of the Final Office Action dated November 14, 2005 ("the Final Office Action"), the Examiner states that Claims 1-6 and 8-36 stand rejected, and are hereby appealed.

C. Claims on Appeal

There are 35 claims on appeal (claims 1-6 and 8-36).

IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

The claims hereby Appealed are based on the claims as amended in the Response to Notice of Non-compliant Amendment filed August 11, 2005 in response to the Office Action dated January 25, 2005. No amendment was offered or entered after the Final Office Action.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

The subject matter of Claim 1 can be summarized as follows:

A method for identifying customer premises equipment in a distributed network is provided. The method includes generating a device identifier code that specifically identifies a product model of a customer premises equipment device in response to receiving a point-to-point over Ethernet (PPPoE) packet communicated over the distributed network. A point-to-point over Ethernet (PPPoE) active discovery initiation (PADI) packet is broadcast. The PPPoE active discovery initiation (PADI) packet includes a tag, which is based on the device identifier code. A point-to-point over Ethernet (PPPoE) active discovery offer (PADO) packet is received. A point-to-point over Ethernet (PPPoE) active discovery request (PADR) packet is transmitted in response to receiving the PADO packet. The PADR packet includes a tag that specifically identifies a product model of the customer premises device. A point-to-point over Ethernet (PPPoE) active discovery session (PADS) packet is received, and an Ethernet communication session is conducted.

Claim 1 finds support on at least page 2, paragraph [1006]; and pages 6 and 7, paragraphs [1028] and [1029] of the specification.

The subject matter of Claim 6 can be summarized as follows:

A method including sending a point-to-point over Ethernet (PPPoE) active discovery packet is provided. The PPPoE active discovery packet includes a tag that specifically identifies a product model of a customer premises equipment (CPE) device.

A device identifier code is generated based on the tag in response to receiving the PPPoE active discovery packet.

Claim 6 finds support on at least page 8 paragraph [1034] of the specification.

The subject matter of Claim 16 can be summarized as follows:

A method including receiving a point-to-point over Ethernet (PPPoE) active discovery packet is provided. The PPPoE active discovery packet includes a tag that identifies a product model of a customer premises equipment device. The product model of the customer premises equipment device is determined based on the tag.

Claim 16 finds support on at least page 2, paragraph [1008]; and pages 6-7, paragraphs [1028]–[1030] of the specification.

The subject matter of Claim 21 can be summarized as follows:

A customer premises equipment (CPE) device including a network interface, and a module coupled to the network interface is provided. The module is configured to transmit a point-to-point over Ethernet (PPPoE) active discovery packet including a tag. The tag includes a device identifier field that uniquely identifies a CPE product model.

Claim 21 finds support on at least page 3, paragraph [1009]; and page 8, paragraphs [1033] and [1034] of the specification.

The subject matter of Claim 24 can be summarized as follows:

A system for identifying a communications device including an access concentrator configured to receive an active discovery packet having a tag comprising a device identifier field is provided. The active discovery packet is arranged for transmission by a communications device capable of terminating a point-to-point connection. The communications device identifier field uniquely identifies a product

model associated with the communications device. The system also includes a database sever to store the device identifier field.

Claim 24 finds support on at least page 3, paragraph [1010]; pages 5-6, paragraph [1026]; and page 7, paragraph [1030] of the specification.

The subject matter of Claim 27 can be summarized as follows:

A data packet for use in a distributed network including an Ethertype payload field is provided. The Ethertype payload field includes a host-uniq tag value indicating a model type of a digital switching device.

Claim 27 finds support on at least pages 9-10, paragraphs [1040] and [1041] of the specification.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

A. Claims 1-10, and 13-30 are rejected under 35 U.S.C. 103 (a) as being unpatentable over RFC 2516 in view of U.S. Patent Application Publication No. 2002/0095299 ("Iwakata").

B. Claims 31-35 are rejected under 35 U.S.C. 103 (a) as being unpatentable over RFC 2516 in view of U.S. Patent Application Publication No. 2002/0095299 ("Iwakata") as applied to claim 1, and further in view of U.S. Patent Application Publication No. 2003/0053443 ("Owens").

C. Claims 11-12, and 36 are rejected under 35 U.S.C. 103 (a) as being unpatentable over RFC 2516 in view of U.S. Patent Application Publication No. 2002/0095299 ("Iwakata") as applied to claim 6, further in view of U.S. Patent Application Publication No. 2003/0053443 ("Owens"), and further in view of U.S. Patent Application Publication No. 2005/0129002 ("Koo").

VII. ARGUMENT (37 C.F.R. § 41.37(c)(1)(vii))

Appellant respectfully appeals each of the rejections applied against all claims now pending on appeal.

A. Claims 1-10 and 13-30 Are Allowable over RFC 2516 in View of Iwakata

Appellant traverses the rejection of claims 1-10 and 13-30 under 35 U.S.C. §103(a) over RFC 2516 in view of U.S. Pat. Publication No. 2002/0095299 ("Iwakata") at page 3, paragraph 3 of the Final Office Action mailed on November 14, 2005.

There are six independent claims in the case. Each independent claim stands or falls independently. Arguments demonstrating the allowability of each independent claim are presented herein.

The Final Office Action failed to establish a *prima facie* case of obviousness, which requires:

- 1) there must be a suggestion or motivation to make the asserted combination, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art;
- 2) there must be a reasonable expectation of success; and
- 3) the alleged combination teach or suggest all the claim limitations.

See *M.P.E.P.* §2142.

Appellant submits that there is no suggestion or motivation to make the asserted combination of RFC 2516 and Iwakata, and there is no reasonable expectation of success for the asserted combination of RFC 2516 and Iwakata. Moreover, the asserted combination fails to disclose or suggest the particular combination of elements recited in the claims.

Independent claim 1 recites transmitting a point-to-point over Ethernet (PPPoE) active discovery request (PADR) packet in response to receiving the [active discovery offer] PADO packet, wherein the PADR packet includes a tag that specifically identifies a product model of the customer premises device. The Final Office Action asserts that RFC 2516 teaches generating a device identifier code that specifically identifies a product model of the customer premises

equipment device, citing pages 3-4 and sections 4 and 5 of RFC 2516. *Final Office Action*, p. 3, paragraph 3a. Appellant disagrees.

Pages 3-4 and sections 4 and 5 of RFC 2516 generally disclose various aspects of a discovery process initiated by a host including various data fields transmitted during the discovery stage. The *Final Office Action* does not provide any clear indication of which specific aspects of the discovery stage are alleged to correspond to generating a device identifier code that specifically identifies a product model of the customer premises equipment device. RFC 2516 discusses only one data field that may be transmitted during the discovery stage and that includes any identification of the customer premises equipment device, namely the SOURCE_ADDR field that include an Ethernet MAC address. Additionally, the *Final Office Action* appears to suggest that the Host-Uniq tag described in RFC 2516 teaches uniquely identifying the customer premises equipment device. *Final Office Action*, p.2, paragraph 2.

RFC 2615 does not teach or suggest generating a device identifier code that specifically identifies a product model of the customer premises equipment device. During the discovery stage described in RFC 2516, a SOURCE_ADDR field including the Ethernet MAC address of the source device is sent from the host. *RFC 2516*, p. 2, section 4, "Payloads." Appellant notes that the Ethernet Media Access Control (MAC) address is a hardware address, not a device identifier code that specifically identifies a product model. For example, it is a common network administration practice to limit access to a network to devices with specified MAC addresses. In such networks, it is common to "clone" or "spoof" a MAC address of a first hardware device on a second hardware device. In this case, the MAC address sent by the second hardware device is changed to the MAC address of the first hardware device to enable the second hardware device to function on a network as though it were the first hardware device. See http://en.wikipedia.org/wiki/Mac_address#Changing_MAC_addresses. The first and second hardware devices need not be of the same product model for MAC address cloning to work. Thus, a MAC address is not a device identifier code that specifically identifies a product model. In further support of this point, Appellant notes that the RFC 2516 reference itself distinguishes between a product model and a MAC address. For example, in Appendix A of RFC 2516 at page 8, a tag "AC-Name" that uniquely identifies a particular Access Concentrator unit is described as "a combination of Trademark, model and serial id information or simply by an

UTF-8 rendition of the *MAC address* of the box.” RFC 2516, p. 8, Appendix A (emphasis added). Thus, RFC 2516 describes the MAC address as different from the product model. The SOURCE_ADDR of RFC 2516, therefore, does not teach or suggest a device identifier code that specifically identifies a product model of a customer premises equipment device.

The discovery stage described in RFC 2516 may include transmitting a “Host-Uniq” tag. RFC 2516, p. 9. The description of the Host-Uniq tag in RFC 2516 states that the tag is used to uniquely associate an access controller response to a particular host request. The description of the Host-Uniq tag in RFC 2516 does not indicate that the tag includes a device identifier code that specifically identifies a product model of the customer premises equipment device. The Final Office Action appears to demonstrate a misunderstanding of the function of the Host-Uniq tag when it states that “RFC 2516 was used as mentioned above to teach the use of [a] Tag to identify an element unique to a host (Host_uniq tag).” *Final Office Action*, p. 2, paragraph 2. In fact, RFC 2516 does not teach or suggest that the Host-Uniq tag is an element unique to a host, but rather that the tag is “used by a Host to uniquely associate an Access concentrator response (PADO or PADS) to a particular Host request (PADI or PADR).” That is, RFC 2516 teaches that a Host-Uniq tag is an element unique to a particular request, but does not teach or suggest that the tag is an element unique to a particular host. Thus, the Host-Uniq tag of RFC 2516 does not teach or suggest a device identifier code that specifically identifies a product model of the customer premises equipment device, as recited in claim 1.

Neither the SOURCE_ADDR data field nor the Host-Uniq tag of RFC 2516 disclose or suggest a device identifier code that specifically identifies a product model of the customer premises equipment device. No other aspect of the discovery stage described in RFC 2516 appears to include any description of the host device; therefore, RFC 2516 does not disclose or suggest a device identifier code that specifically identifies a product model of the customer premises equipment device. The Final Office Action therefore fails to establish a prima facie case of obviousness with regard to at least the first element of claim 1.

With regard to the second element of claim 1, the Final Office Action acknowledges that RFC 2516 does not teach broadcasting a point-to-point over Ethernet (PPPoE) active discovery initiation (PADI) packet, wherein the PPPoE active discovery initiation (PADI) packet includes a

tag, wherein the tag is based on the device identifier code. *Final Office Action*, p. 4. However, the Final Office Action asserts that RFC 2516 teaches broadcasting a point-to-point over Ethernet (PPPoE) active discovery initiation (PADI) packet or active discovery response (PADR) packet, and that either a PADI or PADR packet may include tags, citing pages 4 and 5, and section 5.1, and Appendix A of RFC 2516. The Final Office Action also asserts that Iwakata teaches product identification information (PII) stored in a PII storage unit, and that the PII includes the product model number. The Final Office Action further asserts that it would have been obvious to one with ordinary skill in the art to incorporate into the PADI packet a tag that specifically identifies a product model of a customer premises device as taught by Iwakata.

Appellant submits that the system of Iwakata is technically inconsistent with the method of RFC 2516. RFC 2516 discloses a standard method for transporting multi-protocol datagrams over point-to-point communications links. *See RFC 2516*, p. 1, Abstract. RFC 2516 describes how to build point-to-point (PPP) sessions and how to encapsulate PPP packets over Ethernet. *See RFC 2516*, p. 1, Abstract. Additionally, RFC 2516 discloses that point-to-point over Ethernet (PPPoE) has two distinct stages: a discovery stage and a PPP session stage. *See RFC 2516*, p. 2, paragraph 3, "Protocol Overview." The cited portions of RFC 2516 are directed to the PPPoE discovery stage. *RFC 2516*, p. 1, paragraph 3 through p. 6, paragraph 6, and Appendix A. In direct contrast, the system of Iwakata activates a control from the host machine to the client machine after confirmation of the connection. *See Iwakata*, p. 5, paragraph 0083. Iwakata discloses that the host machine uses the control to query the client machine. *See Iwakata*, p. 5, paragraphs 0083-0084; and see also Figure 3, blocks 301, 302 and sequence. Iwakata discloses that the product information is collected after the connection is established in block 301. *See Iwakata*, Figure 3, blocks 303-307. Thus, the product identification information of Iwakata is collected after the discovery stage is complete. Consequently, the post-discovery stage product registration system of Iwakata is technically inconsistent with the discovery stage method of RFC 2516. RFC 2516 and Iwakata fail to disclose or suggest any motivation to modify the discovery stage method of RFC 2516 to use the produce identification information of Iwakata. The only motivation to make the asserted combination is provided by the disclosure of the present application. Accordingly, the asserted combination is an improper hindsight reconstruction and should be withdrawn. Therefore, claim 1 is allowable.

Moreover, there is no reasonable expectation of success in the combination cited. In the discovery stage of RFC 2516, the host broadcasts an initiation packet, one or more access concentrators send an offer packet, the host sends a unicast session request packet, and the selected access concentrator sends a confirmation packet. *See RFC 2516*, p. 4, paragraph 5, "Discovery Stage." At this point, the host may proceed to a PPPoE Session stage. *See RFC 2516*, p. 4, paragraph 5, "Discovery Stage." RFC 2516 provides no indication that the initiation packet contains a tag based on the device identifier code or that an access concentrator is adapted to receive such a tag. Since Iwakata is silent with regard to the discovery stage, there is no reasonable expectation that the asserted combination of RFC 2516 and Iwakata would be successful. Thus, for this additional reason, claim 1 is allowable.

Claims 2-5 depend from independent claim 1. Since the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 1, the combination also fails to establish prima facie obviousness with regard to claims 2-5. Thus, claims 2-5 are allowable.

Independent claim 6 recites sending a point-to-point over Ethernet (PPPoE) active discovery packet, wherein the PPPoE active discovery packet includes a tag that specifically identifies a product model of a customer premises equipment (CPE) device. With regard to independent claim 6, the Final Office Action acknowledges that RFC 2516 does not teach a PPPoE active discovery packet that specifically identifies a product model of a customer premises equipment device, and does not teach generating a device identifier code based on the tag in response to receiving the PPPoE active discovery packet. *Final Office Action*, p. 5, paragraph 3b. However, the Final Office Action asserts that Iwakata teaches a customer information control system wherein product identification information, including a product model number, is stored in a customer information database.

Appellant notes that storing product identification information in a customer information database in response to receiving personal information and product information does not disclose or suggest generating a device identifier code based on the tag in response to receiving the PPPoE active discovery packet, as in claim 6. Furthermore, as previously discussed, Iwakata does not discuss the discovery stage or the transmission of discovery packets; therefore, Iwakata

cannot disclose or suggest a PPPoE active discovery packet including a tag that specifically identifies a product model of a customer premises equipment device or generating a device identifier code based on the tag in response to receiving the PPPoE active discovery packet.

Since neither RFC 2516 nor Iwakata disclose or suggest all of the elements of claim 6, the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 6. Additionally, RFC 2516 and Iwakata are technically incompatible as previously discussed with regard to claim 1; therefore, there is no reasonable expectation of success for the asserted combination of RFC 2516 and Iwakata. Moreover, there is no suggestion or motivation to make the asserted combination of RFC 2516 and Iwakata as previously discussed with regard to claim 1. Thus, claim 6 is allowable.

Claims 8-10 and 13-15 depend from independent claim 6. Since the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 6, the combination also fails to establish prima facie obviousness with regard to claims 8-10 and 13-15. Therefore, claims 8-10 and 13-15 are allowable.

Independent claim 16 recites receiving a point-to-point over Ethernet (PPPoE) active discovery packet, wherein the PPPoE active discovery packet includes a tag that specifically identifies a product model of a customer premises equipment (CPE) device. The Final Office Action acknowledges that RFC 2516 does not teach a tag that identifies a product model of a customer premises equipment device. *Final Office Action*, p.6, paragraph 3c. However, the Final Office Action asserts that Iwakata teaches a customer information control system wherein product identification information, including product model number, is stored in a customer information database.

Appellant notes that the customer information control system of Iwakata does not disclose or suggest a PPPoE active discovery packet including a tag that identifies a product model of a customer premises equipment device as recited in claim 16. Furthermore, as previously discussed, Iwakata does not discuss the discovery stage or the transmission of discovery packets; therefore, Iwakata does not disclose or suggest a PPPoE active discovery packet including a tag that specifically identifies a product model of a customer premises equipment device.

Since neither RFC 2516 nor Iwakata disclose or suggest all of the elements of claim 16, the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 16. Additionally, RFC 2516 and Iwakata are technically incompatible as previously discussed with regard to claim 1; therefore, there is no reasonable expectation of success for the asserted combination of RFC 2516 and Iwakata. Moreover, there is no suggestion or motivation to make the asserted combination of RFC 2516 and Iwakata as previously discussed with regard to claim 1. Therefore, claim 16 is allowable.

Claims 17-20 depend from independent claims 16. Because the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claims 16, the combination also fails to establish prima facie obviousness with regard to claims 17-20. Therefore, claims 17-20 are allowable.

Independent claim 21 recites a customer premises equipment (CPE) device having a module configured to transmit a point-to-point over Ethernet (PPPoE) active discovery packet including a tag, the tag comprising a device identifier field that uniquely identifies a CPE product model. The Final Office Action acknowledges that RFC 2516 does not teach a tag that identifies a product model of a customer premises equipment device. *Final Office Action*, p.6, paragraph 3c. However, the Final Office Action asserts that Iwakata teaches a customer information control system wherein product identification information, including product model number, is stored in a customer information database.

In contrast to claim 21, the customer information control system of Iwakata does not disclose or suggest a PPPoE active discovery packet including a tag, where the tag comprises a device identifier field that uniquely identifies a CPE product model. Furthermore, as previously discussed, Iwakata does not discuss the discovery stage or the transmission of discovery packets; therefore, Iwakata does not disclose or suggest a PPPoE active discovery packet including a tag that specifically identifies a product model of a customer premises equipment device.

Since neither RFC 2516 nor Iwakata disclose or suggest all of the elements of claim 21, the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 21. Additionally, RFC 2516 and Iwakata are technically incompatible as previously discussed with regard to claim 1; therefore, there is no reasonable

expectation of success for the asserted combination of RFC 2516 and Iwakata. Moreover, there is no suggestion or motivation to make the asserted combination of RFC 2516 and Iwakata as previously discussed with regard to claim 1. Thus, claim 21 is allowable.

Claims 22 and 23 depend from independent claim 21. Because the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 21, the combination also fails to establish prima facie obviousness with regard to claims 22 and 23. Claim 22 and 23 are therefore allowable.

Independent claim 24 recites an access concentrator configured to receive an active discovery packet having a tag comprising a device identifier field, wherein the active discovery packet is arranged for transmission by a communications device capable of terminating a point-to-point connection, and wherein the communications device identifier field uniquely identifies a product model associated with the communications device. The Final Office Action acknowledges that RFC 2516 does not teach a tag that identifies a product model of a customer premises equipment device. *Final Office Action*, p.6, paragraph 3c. However, the Final Office Action asserts that Iwakata teaches a customer information control system wherein product identification information, including product model number, is stored in a customer information database.

The customer information control system of Iwakata does not disclose or suggest an active discovery packet having a tag comprising a device identifier field, wherein the active discovery packet is arranged for transmission by a communications device capable of terminating a point-to-point connection, and wherein the communications device identifier field uniquely identifies a product model associated with the communications device as recited in claim 24. Furthermore, as previously discussed, Iwakata does not discuss the discovery stage or the transmission of discovery packets; therefore, Iwakata does not disclose or suggest an active discovery packet having a tag comprising a device identifier field.

Since neither RFC 2516 nor Iwakata disclose or suggest all of the elements of claim 24, the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 24. Additionally, RFC 2516 and Iwakata are technically incompatible as previously discussed with regard to claim 1; therefore, there is no reasonable

expectation of success for the asserted combination of RFC 2516 and Iwakata. Moreover, there is no suggestion or motivation to make the asserted combination of RFC 2516 and Iwakata as previously discussed with regard to claim 1. Thus, claim 24 is allowable.

Claims 25 and 26 depend from independent claim 24. Since the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 24, the combination also fails to establish prima facie obviousness with regard to claims 25 and 26. Claims 25 and 26 are therefore allowable.

Independent claim 27 recites an Ethertype payload field including a host-uniq tag value indicating a model type of a digital switching device. With regard to claim 27, the Final Office Action acknowledges that RFC 2516 does not teach the host-uniq tag value indicating a model type of a digital switching device. *Final Office Action*, p.11, paragraph 3s. However, the Final Office Action asserts that Iwakata teaches a customer information control system wherein product identification information, including the product model number, is stored in a customer information database. The product information control system of Iwakata does not disclose or suggest a host-uniq tag value indicating a model type of a digital switching device. As previously discussed, Iwakata does not disclose any aspect of the PPPoE discovery stage. The host-uniq tag described in RFC 2516 is a tag used in the discovery stage. Therefore, the customer information control system of Iwakata does not disclose or suggest a host-uniq tag value indicating a model type of a digital switching device, as recited in claim 27.

Since neither RFC 2516 nor Iwakata disclose or suggest all of the elements of claim 27, the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim 27. Additionally, RFC 2516 and Iwakata are technically incompatible as previously discussed with regard to claim 1; therefore, there is no reasonable expectation of success for the asserted combination of RFC 2516 and Iwakata. Moreover, there is no suggestion or motivation to make the asserted combination of RFC 2516 and Iwakata as previously discussed with regard to claim 1. For at least the foregoing reasons, claim 27 is allowable.

Claims 28-30 depend from independent claim 27. Since the proposed combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claim

27, the combination also fails to establish prima facie obviousness with regard to claims 28-30. Therefore, independent claim 27, and claims 28-30, which depend from claim 27, are allowable.

In view of the arguments presented above, the asserted combination of RFC 2516 and Iwakata fails to establish a prima facie case of obviousness with regard to claims 1-10 and 13-30. Therefore, the rejection of claims 1-10 and 13-30 over the asserted combination of RFC 2516 and Iwakata is improper and should be withdrawn. Claims 1-10 and 13-30 are allowable.

B. Claims 31-35 Are Allowable over RFC 2516, Iwakata and Owens

Appellant respectfully traverses the rejection of claims 31-35 under 35 U.S.C. §103(a) over RFC 2516, Iwakata, and U.S. Patent Pub. No. 2003/0053443 ("Owens"). As previously discussed, the asserted combination of RFC 2516 and Iwakata fails to disclose or suggest transmitting a point-to-point over Ethernet (PPPoE) active discovery request (PADR) packet in response to receiving the PADO packet, wherein the PADR packet includes a tag that specifically identifies a product model of the customer premises device, as recited in claim 1, from which claims 31-35 depend. Owens discloses a method of establishing a PPPoE connection using an Ethernet MAC address of the source device as the source address. *See Owens*, p. 6, paragraph 0076. However, Owens does not disclose a tag that specifically identifies a product model of the customer premises device, as recited in claim 1. Thus, the asserted combination of RFC 2516, Iwakata and Owens does not disclose or suggest at least one element of each of the dependent claims 31-35 at least by virtue of their dependency from claim 1. Therefore, the rejection of claims 31-35 over RFC 2516, Iwakata and Owens should be withdrawn.

Further, the system of Iwakata is technically inconsistent with the system of Owens and the method of RFC 2516. In particular, Owens is directed to provisioning broadband services. *See Owens*, Title, Abstract and paragraph 0002. RFC 2516 is generally directed to the PPPoE discovery stage. *RFC 2516*, p.1, paragraph 3 through p. 6, paragraph 6, and Appendix A. In direct contrast, the system of Iwakata activates a control from the host machine to the client machine after confirmation of the connection. *See Iwakata*, p. 5, paragraph 0083. Iwakata discloses that the host machine uses the control to query the client machine. *See Iwakata*, p. 5, paragraphs 0083-0084; and see also Figure 3, blocks 301, 302 and sequence. Iwakata discloses

that the product information is collected after the connection is established in block 301. *See Iwakata*, Figure 3, blocks 303-307. Thus, the product identification information of Iwakata is collected after the broadband services are established, i.e., after the discovery stage is complete. Consequently, the post-discovery stage product registration system of Iwakata is technically inconsistent with the broadband provisioning system of Owens and the discovery stage method of RFC 2516. Accordingly, the asserted combination is improper and should be withdrawn and, therefore, claims 31-35 are allowable.

C. Claims 11-12 and 36 Are Allowable over RFC 2516, Iwakata, Owens and Koo

Appellant traverses the rejection of claims 11-12 and 36 under 35 U.S.C. §103(a) over RFC 2516, Iwakata, Owens, and U.S. Pat. Pub. No. 2005/0129002 ("Koo") at page 16 of the Final Office Action. It is not clear from the Final Office Action exactly what combination of reference is intended for the rejection of claims 11-12 and 36. The first sentence of paragraph 6 on page 16 states, "Claims 11-12 and 36 [are] rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 2516 in view of U.S. Patent Application No. 2002/0095299 to Iwakata as applied to claim 6 above, and further in view of U.S. Application No. 2003/0053443 to Owens." However, the fourth sentence of paragraph 6 cites to Koo as teaching "the CPE is an ADSL router." Appellant submits that claims 11-12 and 36 are allowable over any combination of RFC 2516, Iwakata, Owens and Koo.

For example, Koo discloses a memory means of a DSL web-phone service apparatus for saving and managing an ID number and for transmitting the ID number. *See Koo*, Abstract. Koo fails to disclose or suggest sending a PPPoE active discovery packet that includes a tag that specifically identifies a product model of a customer premises equipment (CPE) device, as recited in claim 6. As previously stated, RFC 2516, Iwakata, and Owens also do not disclose or suggest a tag that specifically identifies a product model of a customer premises equipment (CPE) device. Therefore, in light of the arguments presented above, the combination of RFC 2516, Iwakata, Owens and Koo, or any combination of such references, fails to disclose at least one element of independent claim 6 and of claims 11-12 and 36, at least by virtue of their dependency from claim 6. Claims 11-12 and 36 are therefore allowable.

For at least the foregoing reasons, Appellant respectfully submits that all of the pending claims of the present application are allowable. In view of the arguments presented above, Appellant respectfully requests reconsideration and allowance of the application.

VIII. CLAIMS APPENDIX (37 C.F.R. § 41.37(c)(1)(viii))

The text of each claim involved in the appeal is as follows:

1. (Previously Presented) A method for identifying customer premises equipment in a distributed network, the method comprising:

generating a device identifier code that specifically identifies a product model of a customer premises equipment device in response to receiving a point-to-point over Ethernet (PPPoE) packet communicated over the distributed network;

broadcasting a point-to-point over Ethernet (PPPoE) active discovery initiation (PADI) packet, wherein the PPPoE active discovery initiation (PADI) packet includes a tag, wherein the tag is based on the device identifier code;

receiving a point-to-point over Ethernet (PPPoE) active discovery offer (PADO) packet;

transmitting a point-to-point over Ethernet (PPPoE) active discovery request (PADR) packet in response to receiving the PADO packet, wherein the PADR packet includes a tag that specifically identifies a product model of the customer premises device;

receiving a point-to-point over Ethernet (PPPoE) active discovery session (PADS) packet; and

conducting an Ethernet communication session.

2. (Original) The method of claim 1, wherein the tag is a host-uniq tag.

3. (Original) The method of claim 1, wherein the device identifier code is a nine bit binary number.

4. (Original) The method of claim 1, wherein the customer premises equipment is a device that terminates PPPoE communications.

5. (Original) The method of claim 1, further comprising receiving a point-to-point over Ethernet (PPPoE) active discovery packet that includes the tag and storing a device identifier code that identifies the product model in a database.

6. (Previously Presented) A method comprising:

sending a point-to-point over Ethernet (PPPoE) active discovery packet, wherein the PPPoE active discovery packet includes a tag that specifically identifies a product model of a customer premises equipment (CPE) device; and
generating a device identifier code based on the tag in response to receiving the PPPoE active discovery packet.

7. (Canceled)

8. (Original) The method of claim 6, wherein the tag is a host-uniq tag.

9. (Original) The method of claim 6, wherein the PPPoE active discovery packet is a PPPoE active discovery initiation (PADI) packet.

10. (Original) The method of claim 6, wherein the PPPoE active discovery packet is a PPPoE active discovery request (PADR) packet.

11. (Original) The method of claim 6, wherein the customer premises equipment device is a router.

12. (Original) The method of claim 6, wherein the customer premises equipment is a switch.

13. (Original) The method of claim 6, further comprising receiving a PPPoE active discovery packet.

14. (Original) The method of claim 13, wherein the PPPoE active discovery packet received is a PPPoE active discovery offer (PADO) packet.

15. (Original) The method of claim 13, wherein the PPPoE active discovery packet received is a PPPoE active discovery session (PADS) packet.

16. (Original) A method comprising:
receiving a point-to-point over Ethernet (PPPoE) active discovery packet, wherein
the PPPoE active discovery packet includes a tag that identifies a product
model of a customer premises equipment device; and
determining the product model of the customer premises equipment device based
on the tag.

17. (Original) The method of claim 16, wherein the step of determining further
comprises storing the product model of the customer premises equipment device in a
database.

18. (Original) The method of claim 17, further comprising managing the database
based upon the product model of the customer premises equipment device.

19. (Original) The method of claim 16, wherein the PPPoE active discovery
packet is a PPPoE active discovery initiation (PADI) packet.

20. (Original) The method of claim 16, wherein the PPPoE active discovery
packet is a PPPoE active discovery request (PADR) packet.

21. (Original) A customer premises equipment (CPE) device comprising:
a network interface; and
a module coupled to the network interface, said module configured to transmit a
point-to-point over Ethernet (PPPoE) active discovery packet including a
tag, the tag comprising a device identifier field that uniquely identifies a
CPE product model.

22. (Original) The customer premises equipment device of claim 21, wherein the device identifier field comprises a predefined binary number.

23. (Original) The customer premises equipment device of claim 21, wherein the tag is a host-uniq tag.

24. (Original) A system for identifying a communications device, the system comprising:

an access concentrator configured to receive an active discovery packet having a tag comprising a device identifier field, wherein the active discovery packet is arranged for transmission by a communications device capable of terminating a point-to-point connection, and wherein the communications device identifier field uniquely identifies a product model associated with the communications device; and
a database sever to store the device identifier field.

25. (Original) The system of claim 24, wherein the point-to-point connection is a point-to-point over Ethernet (PPPoE) connection.

26. (Original) The system of claim 24, wherein the access concentrator is a broadband remote access server.

27. (Original) A data packet for use in a distributed network, the data packet comprising:

an Ethertype payload field including a host-uniq tag value indicating a model type of a digital switching device.

28. (Original) The data packet of claim 27, further comprising:

a service provider destination address, the service provider destination address associated with a destination node within the distributed network; and
a service provider source address, the service provider source address associated with a storage device at a source node within the distributed network.

29. (Original) The data packet of claim 28, wherein the distributed network is an Ethernet distributed network.

30. (Original) The data packet of claim 28, wherein the model type of the digital switching device is a nine bit binary device identifier code associated with customer premises equipment.

31. (Previously Presented) The method of claim 1, wherein the Ethernet communication session is conducted via a distributed IP network.

32. (Previously Presented) The method of claim 1, wherein the Ethernet communication session is conducted via a digital subscriber line (DSL) connection.

33. (Previously Presented) The method of claim 1, wherein the point-to-point over Ethernet active discovery offer packet is received from a broadband remote access server.

34. (Previously Presented) The method of claim 1, wherein the Ethernet communication session is conducted via an asynchronous transfer mode (ATM) connection.

35. (Previously Presented) The method of claim 1, wherein the Ethernet communication session is conducted via an asymmetric digital subscriber line (ADSL) connection.

36. (Previously Presented) The method of claim 6, wherein the customer premises equipment device is an asymmetric digital subscriber line router.

IX. EVIDENCE APPENDIX (37 C.F.R. § 41.37(c)(1)(ix))

(N/A)

X. RELATED PROCEEDINGS APPENDIX (37 C.F.R. § 41.37(c)(1)(x))

(N/A)


XI. CONCLUSION

For at least the above reasons, all pending claims are allowable and a notice of allowance is courteously solicited. Please direct any questions or comments to the undersigned attorney at the address indicated. Appellant respectfully requests reconsideration and allowance of all claims and that this patent application be passed to issue.

Respectfully submitted,

Date

4-17-2006


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